

### ABSTRACT OF THE DISCLOSURE

A line based image matching method in which a model image indexed by similar shape descriptors to a query image is retrieved from an image database indexed by line based shape descriptors. The line based image matching method involves: collecting line information of a query image and model images; defining the binary relation between the lines of the query image and the lines of the model images; measuring the compatibility coefficients of the node-label pairs of the query and model images based on the binary relation; and measuring the similarity between the query and model images on the basis of continuous relaxation labeling using the compatibility coefficient.